Montana Fish, Wildlife & Parks

SPECIFICATIONS FOR WORK
GENERAL PROVISIONS

Contents:

1. PROJECT DESCRIPTION

The Project involves construction work associated with:

Region 4 Headquarters Parking Lot Improvements
Fish, Wildlife & Parks (FWP) project # 7199123
Located in Great Falls, MT

This project includes grading and paving of gravel parking lot including striping. Alternate options include slurry seal, crack seal, asphalt removal, and incidentals.

2. PROJECT RELATED CONTACTS

Project contacts are designated as follows:

Owner:
Montana FWP
1420 E. Sixth Ave.
PO Box 200701
Helena, MT 59620-0701

FWP Project Representative:
Joseph Renenger
FWP Project Manager
1522 Ninth Avenue
Helena, MT 59620
406-841-4007 (wk)
406-439-9889 (cell)
406-841-4004 (fax)

3. SITE INSPECTION

All Bidders should satisfy themselves as to the construction conditions by personal examination of the site described in this document. Bidders are encouraged to make any - investigations necessary to assess the nature of the construction and the difficulties to be encountered, see General Conditions, Article 3.

4. SOILS INFORMATION

Geotechnical investigation work has not been done for this Project. It is the responsibility of the Bidders to conduct all investigations and determine the soil type and digging conditions that may be encountered with this Project prior to bid preparation, see General Conditions, Article 3.

5. PROJECT REPRESENTATIVE, INSPECTIONS, AND TESTING

The Contractor's work will be periodically tested and observed to insure compliance with the Contract Documents. Complete payment will not be made until the Contractor has demonstrated that the work is complete and has been performed as required. If the

Project Representative detects a discrepancy between the work and the requirements of the Contract Documents at any time, up to and including final inspection, such work will not be completely paid for until the Contractor has corrected the deficiency, see General Conditions, Article 9.

The Project Representative will periodically monitor the construction of work to determine if the work is being performed in accordance with the contract requirements. The Project Representative does not have the authority or means to control the Contractor's methods of construction. It is, therefore, the Contractor's responsibility to utilize all methods, equipment, personnel, and other means necessary to assure that the work is installed in compliance with the Drawings and Specifications, and laws and regulations applicable to the work. Any discrepancies noted shall be brought to the Contractor's attention, who shall immediately correct the discrepancy. Failure of the Project Representative to detect a discrepancy will not relieve the Contractor of his ultimate responsibility to perform the work as required, see General Conditions, Article 3.

The Contractor shall inspect the work as it is being performed. Any deviation from the Contract requirements shall be immediately corrected. Prior to any scheduled observation by the Project Representative, the Contractor shall again inspect the work and certify to the Project Representative that he has inspected the work and it meets the requirements of the Contract Documents. The Project Representative may require uncovering of work to verify the work was installed according to the contract documents, see General Conditions, Article 12.

The work will be subject to review by the Project Representative. The results of all such observations, and all contract administration, shall be directed to the Contractor only through the Project Representative.

5.1 Services Required by the Contractor. The Contractor shall provide the following services:

a. Any field surveys to establish locations, elevations, and alignments as stipulated on the Contract Documents. FWP reserves the right to set preliminary construction staking for the project. The Contractor is responsible to notify FWP for any construction staking discrepancies.

b. Preparation and certification of all required shop drawings and submittals as described in the General Conditions, Article 3.

c. All testing requiring the services of a laboratory to determine compliance with the Contract Documents shall be performed by an independent commercial testing laboratory acceptable to the Project Representative. The laboratory shall be staffed with experienced technicians properly equipped, and fully qualified to perform the tests in accordance with the specified standards.

d. Preparation and submittal of a construction schedule, including submittals, see General Conditions, Article 3. The schedule shall be updated as required, as defined in the Contract Documents.

e. All Quality Control testing as required by the Contractor's internal policies.

f. All Quality Assurance testing and/or re-testing as stated in the Contract Documents, see General Conditions, Article 13.

5.2 Services Provided by the Owner. The Owner shall provide the following services at no cost to the Contractor except as required for retests as defined in the Contract Documents.

a. The Project Representative may check compaction of backfill and surfacing courses using laboratory testing submittal information supplied by the Contractor. These tests are to determine if compaction requirements are being fulfilled in accordance with the Contract Documents. It is ultimately the responsibility of the Contractor to insure that this level of compaction is constant and met in all locations.

b. Any additional Quality Assurance testing deemed appropriate by the Owner, at the Owner's expense.

6. ENGINEERING INTERPRETATIONS

Timely Engineering decisions on construction activities or results have an important bearing on the Contractor's schedule. When engineering interpretation affects a plan design or specifications change, it should be realized that more than 24 hours may be required to gain the necessary Owner participation in the decision process including time for formal work directive, or change order preparation as required.

7. REJECTED WORK

Any defective work or nonconforming materials or equipment that may be discovered at any time prior to the expiration of the warranty period, shall be removed and replaced with work or materials conforming to the provisions of the Contract Documents, see General Conditions, Article 12. Failure on the part of the Project Representative to condemn or reject bad or inferior work, or to note nonconforming materials or equipment on the Contractors submittals, shall not be construed to imply acceptance of such work. The Owner shall reserve and retain all its rights and remedies at law against the Contractor and its Surety for correction of any and all latent defects discovered after the guarantee period (MCA 27-2-208).

Only the Project Representative will have the authority to reject work which does not conform to the Contract Documents.

8. UTILITIES

The exact locations of existing utilities that may conflict with the work are not precisely known. It shall be the Contractor's responsibility to contact the owners of the respective utilities and arrange for field location services. **One Call Locators, 1-800-424-5555**

The Contract Documents may show utility locations based on limited field observation and information provided to the Project Representative by others. **The Project Representative cannot guarantee their accuracy.** The Contractor shall immediately notify the Project Representative of any discrepancies with utility locations as shown on the Contract Drawings and/or their bury depths that may in any way affect the intent of construction as scoped in these specifications.

There will be no separate payment for exploratory excavation required to locate underground utilities.

8.1 Notification. The Contractor shall contact, in writing, all public and private utility companies that may have utilities encountered during excavation. The notification includes the following information:

a. The nature of the work that the Contractor will be performing.
b. The time, date and location that the Contractor will be performing work that may conflict with the utility.
c. The nature of work that the utility will be required to perform such as moving a power pole, supporting a pole or underground cable, etc.
d. Requests for field location and identification of utilities.

A copy of the letter of notification shall be provided to the Project Representative. During the course of construction, the Contractor shall keep the utility companies notified of any change in schedule, or nature of work that differs from the original notification.

8.2 Identification. All utilities that may conflict with the work shall be the Contractor's responsibility to locate before any excavation is performed. Field markings provided by the utility companies shall be preserved by the Contractor until actual excavation commences. All utility locations on the Drawings should be considered approximate and should be verified in the field by the Contractor. The Contractor shall also be responsible for locating all utilities that are not located on the Drawings.

Utilities are depicted on the Contract Documents in accordance with their achieved “Quality Levels,” as defined in the American Society of Civil Engineer’s Document, ASCE 38, “Standard Guideline for the Collection and Depiction of Existing Subsurface Utility Data.” Reliance upon these data for risk management purposes during bidding does not relieve the Contractor, or Utility Owner from following all applicable utility damage prevention statutes, policies, and/or procedures during construction. It is important that the Contractor investigates and understands the scope of work between the project Owner and Engineer regarding scope of limits of the utility investigations leading to these utility depictions. Definitions of Quality Levels are described as follows:

a. "QUALITY LEVEL A" – (QLA): LOCATING THROUGH EXCAVATION. QLA data are highly accurate and are obtained by surveying an exposed utility. As such, both horizontal and vertical data are recorded. Survey accuracies are typically set at 15mm (1/2-inch) vertically, and to project survey standards horizontally (typically the same as for topography features), although these survey accuracies and precisions are generally left to the owner to specify in a scope of work. In addition to the applicable standard of care and any other additional standards imposed by commercial indemnity clauses, the accuracy of these location data is also typically guaranteed. Other data typically characterized include material type, surface elevation, utility size/capacity, outside dimensions, and configurations, soil type, and utility condition.

b. "QUALITY LEVEL B" – (QLB): DESIGNATING. QLB information is obtained through the application of appropriate surface geophysical methods to identify the existence and approximate horizontal location of utilities (a utility's "designation") within the project limits, followed by survey, mapping, and professional review of that designation. Underground utilities are identified by interpretation of received signals generated either actively or passively, and through correlating these received signals with visible objects (QLC) and record data (QLD) to determine function. Designated utilities that can't be identified are labeled as "unknowns." Although approximate has no accuracy associated with it, generally the locations are within inches rather than feet. The more utility congested the area or the deeper the utilities, the less likely it is that the designations will achieve that accuracy. These designations are then surveyed to project accuracies and precisions, typically third-order accuracy similar to other topography features. Note that surveying existing one-call marks does not lead to QLB data, since the genesis of the marks was not under the direct responsible charge of the professional certifying the QLB depictions, and one-call generally does not address unknown utilities, privately owned utilities, utilities without records, abandoned utilities, and so on. Nor does the professional have knowledge of the field technician's qualifications, training, and level of effort.

c. "QUALITY LEVEL C" – (QLC): SURFACE VISIBLE FEATURE SURVEY. QLC builds upon the QLD information by adding an independent detailed topography site survey for surface-visible appurtenances of subsurface utilities including but not limited to fire hydrants, valves, risers, and manholes. Professional judgment is used to correlate the QLD data to the surveyed features, thus increasing the reliability of both utility location and existence. It is a function of the professional to determine when records and features do not agree and resolve discrepancies. This may be accomplished by depiction of a utility line at quality level D, effectively bypassing or disregarding (but still depicting) a surveyed structure of unknown

origin. Additional resolution may result from consultation with utility owners.

d. “QUALITY LEVEL D" – (QLD): EXISTING RECORDS RESEARCH. QLD is the most basic level of information. Information is obtained from the review and documentation of existing utility records, verbal accounts, and/or one-call markings (to determine the existence of major active utilities and their approximate locations).

8.3 Removal or Relocation of Utilities. All electric power, street lighting, gas, telephone, and television utilities that require relocation will be the responsibility of the utility owner. A request for extending the specified contract time will be considered if utility owners cause delays.

8.4 Public Utilities. Water, sewer, storm drainage, and other utilities owned and operated by the public entities shall, unless otherwise specifically requested by the utility owner, be removed, relocated, supported or adjusted as required by the Contractor at the Contractor's expense. All such work shall be in accordance with these Contract Documents, or the Owner's Standard Specifications or written instructions when the work involved is not covered by these Specifications.

8.5 Other Utilities. Utilities owned and operated by private individuals, railroads, school districts, associations, or other entities not covered in these Special Provisions shall, unless otherwise specifically requested by the utility owner, be removed, relocated, supported or adjusted as required by the Contractor at the Contractor's expense. All work shall be in accordance with the utility owner's directions, or by methods recognized as being the standard of the industry when directions are not given by the owner of the utility.

8.6 Damage to Utilities and Private Property. The Contractor shall protect all utilities and private property and shall be solely responsible for any damage resulting from his construction activities. The Contractor shall hold the Owner and Project Representative harmless from all actions resulting from his failure to properly protect utilities and private property. All damage to utilities shall be repaired at the Contractor's expense to the full satisfaction of the owner of the damaged utility or property. The Contractor shall provide the Owner with a letter from the owner of the damaged utility or property stating that it has been repaired to the utility owner's full satisfaction.

8.7 Structures. The Contractor shall exercise every precaution to prevent damage to existing buildings or structures in the vicinity of his work. In the event of such damages, he shall repair them to the satisfaction of the owner of the damaged structure at no cost to the Owner.

8.8 Overhead Utilities. The Contractor shall use extreme caution to avoid a conflict, contact, or damage to overhead utilities, such as power lines, streetlights, telephone lines, television lines, poles, or other appurtenances during the course of construction of this project.

8.9 Buried Gas Lines. The Contractor shall provide some means of overhead support for buried gas lines exposed during trenching to prevent rupture in case of trench caving.

8.10 Pavement Removal. Where trench excavation or structure excavation requires the removal of curb and gutter, concrete sidewalks, or asphalt or concrete pavement, the pavement or concrete shall be cut in a straight line parallel to the edge of the excavation by use of a spade-bitted air hammer, concrete saw, colter wheel, or similar approved equipment to obtain a straight, square clean break. Pavement cuts shall be 2 feet wider than the actual trench opening.

8.11 Survey Markers and Monuments. The Contractor shall use every care and precaution to protect and not disturb any survey marker or monuments, such as those that might be located at lot or block corners, property pins, intersection of street monuments or addition line demarcation. Such protection includes markings with flagged high lath and close supervision. No monuments shall be disturbed without prior approval of the Project Representative. Any survey marker or monument disturbed by the Contractor during the construction of the project shall be replaced at no cost to the Owner by a licensed land surveyor.

8.12 Temporary Utilities. The Contractor shall provide all temporary electrical, lighting, telephone, heating, cooling, ventilating, water, sanitary, fire protection, and other utilities and services necessary for the performance of the work. All fees, charges, and other costs associated therewith shall be paid for by the Contractor.

9. CONSTRUCTION SAFETY

The Contractor shall be solely and completely responsible for conditions of the jobsite, including safety of all persons (including employees and subcontractors) and property during performance of the work. This requirement shall apply continuously and not be limited to normal working hours. Safety provisions shall conform to U.S. Department of Labor (OSHA), and all other applicable federal, state, county, and local laws, ordinances, codes, and regulations. Where any of these are in conflict, the more stringent requirement shall be followed. The Contractor's failure to thoroughly familiarize himself with the aforementioned safety provisions shall not relieve them from compliance with the obligations and penalties set forth therein, see General Conditions, Article 10.

10. CONSTRUCTION LIMITS AND AREAS OF DISTURBANCE

10.1 Construction Limits. Where construction easements or property lines, are not specifically called out on the Contract Documents, limit the construction disturbance to ten (10) feet, when measured from the edge of the slope stake grading, or to the adjacent property line, whichever is less. Disturbance and equipment access beyond this limit is not allowed without the written approval of both the Project Representative and the Owner of the affected property. If so approved, disturbance beyond construction limits shall meet all requirements imposed by the landowner; this includes existing roads used and/or improved as well as the construction of new access roads. Special construction, reclamation, or post-construction reclamation or other closure provisions required by the landowner on access roads beyond the construction limits shall be performed by the Contractor at no additional cost to the Owner.

10.2 Areas of Disturbances. Approved areas of disturbance are those areas disturbed by construction activities within the construction limits and along designated or approved access routes. Such areas may require reclamation and revegetation operations, including grading to the original contours, top soiling with salvaged or imported topsoil, seeding, fertilizing, and mulching as specified herein. Other areas that are disturbed by the Contractor's activities outside of the limits noted above will be considered as site damage or unapproved areas of disturbance, see General Conditions, Articles 3 and 10. This includes areas selected by the Contractor outside the defined construction limits for mobilization, offices, equipment, or material storage.

11. DECONTAMINATE CONSTRUCTION EQUIPMENT

Power wash all construction equipment entering the project site to prevent the spread of noxious weeds and aquatic invasive species. This applies to all FWP projects, whether or not individual construction permits specifically address cleaning of equipment.

12. TREE PROTECTION AND PRESERVATION

The Contractor and the Owner shall individually inspect all trees within the project construction limits prior to construction. The Owner shall determine which trees are to be removed and which trees are to be preserved. Construction of the grading, utilities and various roadway facilities must not significantly damage the trees root system or hinder it’s chances for survival. Reasonable variations from the Contract Documents, as directed by the Project Representative, may be employed to ensure the survival of trees.

13. CONSTRUCTION SURVEYS

The Contractor will be responsible for all layout and construction staking utilizing the Project Representative’s existing control and coordinate data for the project. Dimensions and elevations indicated in layout of work shall be verified by the Contractor. Discrepancies between Drawings, Specifications, and existing conditions

shall be referred to the Project Representative for adjustment before work is performed. The Project Representative may set location and grade stakes prior to construction; however, it is ultimately the responsibility of the Contractor to check and verify all construction staking for the project.

Existing survey control (horizontal and vertical) has been set for use in the design and ultimately the construction of these improvements. A listing of the coordinates and vertical elevation for each of these control points may be included in the project drawings.

The Contractor will be responsible for preserving and protecting the survey control until proper referencing by the Contractor has been completed. Any survey control obliterated, removed, or otherwise lost during construction will be replaced at the Contractor's expense.

Contractor shall be aware of property pins and survey monuments. Damage to these pins will require replacement of such by a registered land surveyor at no cost to the owner.

The Contractor shall provide construction staking from the Contractor's layouts and the control points. Contractor's construction staking includes at a minimum:

1. Slope stakes located at critical points as determined by the Project Representative.
2. Blue tops every longitudinally and transversely for subgrade and crushed base to verify finish grading of course.
3. Location and grade stakes for drainage features and retaining walls.
4. Location stakes for roadside safety items, permanent and temporary traffic control, and misc. items as determined by the Project Representative.

Original field notes, computations and other records take by the Contractor for the purpose of quantity and progress surveys shall be furnished promptly to the Project Representative and shall be used to the extent necessary in determining the proper amount of payment due to the Contractor.

14. MATERIAL SOURCES AND CONSTRUCTION WATER

The Contractor shall be responsible for locating all necessary material sources, including aggregates, earthen borrow and water necessary to complete the work. The Contractor shall be responsible for meeting all transportation and environmental regulations as well as paying any royalties. The Contractor shall provide the Project Representative with written approvals of landowners from whom materials are to be obtained, prior to approval.

The Contractor may use materials from any source, providing the materials have been tested through representative samples and will meet the Specifications.

Water for compaction efforts shall be supplied by the Contractor.

15. MATERIALS SALVAGE AND DISPOSAL

Notify the Owner for any material salvaged from the project site not identified in the Contract Documents. The Owner reserves the right to maintain salvaged material at the project site, compensate the Contractor for relocation of salvaged material, or agreed compensation to Owner for material salvaged by the Contractor.

Haul and waste all waste material to a legal site and obey all state, county, and local disposal restrictions and regulations.

16. STORED MATERIALS

Contractor shall use an approved storage area for materials. Materials and/or equipment purchased by the Contractor may be compensated on a monthly basis. For compensation, provide the Project Representative invoices for said materials, shop drawings and/or submittals for approval, and applicable insurance coverage, see General Conditions, Article 9.

17. STAGING AND STOCKPILING AREA

Contractor shall use staging and stockpiling sites for to facilitate the project as approved by the Owner. Contract Documents may show approved staging and stockpiling locations. Notify Owner within 24 hours for approval of staging and stockpiling sites not shown on the Contract Drawings.

18. SECURITY

The Contractor shall provide all security measures necessary to assure the protection of equipment, materials in storage, completed work, and the project in general.

19. CLEANUP

Cleanup for each item of work shall be fully completed and accepted before the item is considered final. If the Contractor fails to perform cleanup within a timely manner the Owner reserves the right to withhold final payment.

Review these Contract Documents for additional Final Cleanup specifications for specific measures, associated with Contractor responsibilities and final payment.

20. ACCESS DURING CONSTRUCTION

Provide emergency access at all times within the project throughout the construction period.

21. CONSTRUCTION TRAFFIC CONTROL

The Contractor is responsible for providing safe construction and work zones within the project limits by implementing the rules, regulations, and practices of the Manual on Uniform Traffic Control Devices, current edition.

22. CONTRACT CLOSEOUT

The Contractor's Superintendent shall maintain at the project site, a "Record Set of Drawings" showing field changes, as-built elevations, unusual conditions encountered during construction, and such other data as required to provide the Owner with an accurate "as constructed" set of record drawings. The Contractor shall furnish the "Record Set" to the Project Representative following the Final Inspection of the Project.

The Contractor's final payment will not be processed until the "Record Set" of drawings are received and approved by the Project Representative.

23. MEASUREMENT AND PAYMENT

Review these Contract Documents for additional Measurement and Payment specifications for definitions. Quantities are listed on the Bid Proposal for Payment Items. Additional material quantities, volumes, and measurements may be shown on the Contract Document drawings and/or specifications.

Unit Price quantities and measurements shown on the Bid Proposal are for bidding and contract purpose only. Quantities and measurements supplied, completed for the project, and verified by the Project Representative shall determine payment. Each unit price will be deemed to include an amount considered by the Contractor to be adequate to cover Contractor's overhead and profit for each bid item.

The Owner or Contractor may make a Claim for an adjustment in Contract Unit Price if the quantity of any item of Unit Price Work performed by the Contractor differs materially and/or significantly (increase or decrease by 50%) from the estimated quantity indicated on the Bid Proposal.

Lump sum bid item quantities will not be measured. Payment for these lump sum bid proposal items will be paid in full amount listed on the Bid Proposal when accepted by the Project Representative, unless specified otherwise.

Montana Fish, Wildlife & Parks

SPECIFICATIONS FOR WORK
TECHNICAL PROVISIONS

Incorporation of Montana Public Works Technical Specifications.

The Technical Specifications as found in Montana Public Works Standard Specifications (MPWSS), Sixth Edition, April 2010 and/or current Addendums or Revisions; are hereby incorporated by reference and made a part of this Contract:

Incorporation of Montana Fish, Wildlife & Parks Technical Specifications and Modifications to MPWSS Technical Specifications.

In addition to the MPWSS Technical Specifications are the following Montana Fish, Wildlife & Parks Technical Specifications (modifications to MPWSS Technical Specifications).

SECTION 01010 - Summary of Work
SECTION 01050 - Field Engineering
SECTION 01400 - Contractor Quality Control and Owner Quality Assurance
SECTION 01450 - Mobilization
SECTION 01750 - Final Cleanup
SECTION 01800 - Erosion and Sediment Control
SECTION 02235 - Crushed Base Course
SECTION 02501 - Hot Plant-Mix Asphalt
SECTION 02595 - Slurry Seal

SECTION 01010- SUMMARY OF WORK

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Owner and Contractor Responsibilities

B. Contractor use of site and premises.

C. Scope of Work

1.2 Owner and Contractor Responsibilities

A. Owners Responsibilities:

1. Responding to project questions
2. Coordination of site access with Montana Department Fish Wildlife and Parks.
3. Submittal and material review
4. Final Acceptance and inspection.

B. Contractors Responsibilities:

1. Coordination with FWP Engineer Joseph Renenger
2. Completion of project as bid
3. Quality control of work

1.3 CONTRACTOR USE OF SITE

A. Limit use of site to allow:

1. Coordinate with FWP to limit public usage in work areas as necessary.

1.3 SCOPE OF WORK

A. Project Objective: Pave and grade FWP equipment parking lot. Repair and seal public parking area.

B. Scope of Work:

Work includes the following but is not limited to the general description contained herein:

BASE BID ITEMS:

A. Base Bid-

1. Mobilization

- General: This bid item shall include the costs associated with mobilizing to the project site, insurance, bonding, permitting, and submittals.

- Work Included:
  - All labor, tools, equipment, materials, royalties, and incidentals needed to complete the work as specified;
  - Transport and set up all equipment, materials, and other items needed to complete the project;
  - All permits, coordination, and compliance inspections required for the work;
  - Insurance and bonding;
  - Prepare and provide submittals, construction schedule, and all other paperwork required by the contract documents prior to construction startup.

- Measurement: No measurement shall be taken for this item.

- Payment: Payment shall be by the price bid for the lump sum bid item listed in the proposal on the schedule shown in Section 01450.

2. Finish Grading

- General: This bid item shall include the preparation of the gravel base section underneath the new asphalt in the back parking lot.

- Work Included:
  - All labor, tools, equipment, materials, and incidentals needed to complete the work as specified;
  - Grading, compaction and preparation of existing gravel;
  - Compaction testing;
  - Survey as needed;

- Watering and dust control;
- Fine grading.
- Spreading excess gravel in locations on site as designated by the project engineer.

- Measurement: Measurement shall be per square yard of gravel surfacing graded. Measurement shall be rounded to the nearest square yard.

- Payment: Payment shall be by the unit price bid for each square yard of finish graded gravel as listed in the proposal.

3. 3" Hot-Mix Asphalt

- General: This bid item shall include the placement of hot-mix asphalt.

- Work Included:
  - All labor, tools, equipment, materials, and incidentals needed to complete the work as specified;
  - Placement of 3" lift of hot-mix asphalt;
  - Tack coat on gravel and against existing asphalt edges;
  - Compaction of asphalt lift;
  - Independent tesing agency quality control;
  - Saw cutting any asphalt edges to be paved against;
  - Removal of any waste or excess asphalt;
  - Final cleanup;

- Measurement: Measurement shall be per square yard of 3" asphalt hot-mix surfacing placed. Measurement shall be rounded to the nearest square yard.

- Payment: Payment shall be by the price bid for the lump sum bid item listed in the proposal.

Additive Alternate #1-

4. Crack Seal

- General: This bid item shall include sealing of cracks in the public parking lot. This does not include sealing cracks in the new asphalt lot for the new building.

- Work Included:
  - All labor, tools, equipment, materials, and incidentals needed to complete the work as specified;
  - All cleaning, drying, and routing of cracks; Installation of backer rod required for cracks wider than 1.5";
  - Removal of any loose or excess previous crack sealant;
  - Following all sealing manufacturer's handling, mixing, and application requirements.

- Measurement: Measurement shall be per square yard of parking lot with crack sealant installed. Measurement shall be to the nearest square yard.

- Payment: Payment shall be by the price bid per square yard of parking lot with crack sealant installed as listed in the proposal.

5. Slurry Seal

- General: This bid item shall include applying a slurry seal to the existing asphalt in the public parking lot.

- Work Included:
  - All labor, tools, equipment, materials, and incidentals needed to complete the work as specified;
  - All cleaning and preparation of existing surface;
  - All cleaning and sweeping of final surface and adjacent areas.
  - Protection of concrete curb, gutter, and sidewalk.

- Measurement: Measurement shall be per square yard of parking lot sealed. Measurement shall be to the nearest square yard.

- Payment: Payment shall be by the price bid per square yard of parking lot sealed as listed in the proposal.

6. Epoxy Striping

- General: This bid item shall include the placement of epoxy striping in public parking lot and existing back pavement

- Work Included:
  - All labor, tools, equipment, materials, and incidentals needed to complete the work as specified;

- Placement of 4” yellow epoxy striping;
- Placement of 4” blue epoxy striping;
- Placement of words and symbols for handicap spaces;
- Placement of chip markers to match existing striping after slurry seal;
- Sweeping and surface preparation for epoxy striping.
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- Measurement: No measurement shall be taken for this item.

- Payment: Payment shall be by the price bid for Epoxy Striping in one payment when work is complete.

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Additive Alternate #2-

7. Remove Asphalt

- General: This bid item shall include asphalt removal in area shown in the plan as staked by FWP engineer.

- Work Included:
  - All labor, tools, equipment, materials, and incidentals needed to complete the work as specified;
  - Saw cutting all edges of asphalt removal to be in contact with new asphalt;
  - Removal of existing asphalt;
  - Hauling and properly disposing of used asphalt;
  - Preparing asphalt cut outs for new asphalt placement.

- Measurement: Measurement shall be per square yard of asphalt removed. Measurement shall be to the nearest square yard.

- Payment: Payment shall be by the price bid per square yard of asphalt removed as listed in the proposal.

CONTRACTS:

All work shall be done under one general contract.

END OF SECTION

SECTION 01050

FIELD ENGINEERING

All applicable portions of this specification section in the MPWSS shall apply with the following additions, deletions and/or modifications.

PART 3 EXECUTION

Add the following:

1.3 CONSTRUCTION SURVEY

A. Engineer will provide survey control (northing/easting) and benchmarks (local datum) for all designed alignments and profiles, as shown on the project drawings.

B. The contractor will be responsible to provide own blue top staking prior to paving. Limit grade stake tolerances to +/-0.05'.

PART 4 MEASUREMENT AND PAYMENT

Add the following:

A. Contractor construction surveying will not be measured for payment, and is considered incidental to other bid items in this contract.

END OF SECTION 01050

SECTION 01400

CONTRACTOR QUALITY CONTROL AND OWNER QUALITY ASSURANCE

All applicable portions of this specification section in the MPWSS shall apply with the following additions, deletions and/or modifications.

PART 3 EXECUTION

3.1 GENERAL

C. Replace with the following:

The Contractor is responsible for providing all quality assurance testing by an independent testing agency. The Contractor will pay for all quality assurance testing by an independent testing agency.

PART 4 MEASUREMENT AND PAYMENT

Replace with the following:

4.1 PAYMENT FOR TESTING

The Contractor will pay for all quality control testing. The Contractor will pay for all quality assurance testing by an independent testing agency. The Contactor will pay for all associated re-testing efforts (both quality control and quality assurance). All testing will be considered incidental to other bid items in this contract.

END OF SECTION 01400

SECTION 01450

MOBILIZATION/DEMOBILIZATION

Added Section.

PART 1 GENERAL

1.1 DESCRIPTION

A. This item shall consist of the prepatory work and operations necessary performed by the Contractor for the movement of personnel, equipment, supplies, and incidentals to and from the work site. The work includes those actions necessary for obtaining necessary permits required for mobilization; for the establishment of all offices and facilities necessary to work on the project; for premiums on contract bonds; for insurance for the contract; and for other work on the various items on the project site. Mobilization costs for subcontracted work shall be considered to be included.

B. Contractor's cost for administration, bonding, insurance, and site documents shall be included in mobilization and shall not be paid as a separate item.

C. All equipment moved to the project sites shall be in good mechanical condition and free of fuel, oil, lubrication, or other fuel leaks. The Contractor shall immediately remove any equipment potentially or actually discharging environmentally damaging fluids.

D. All equipment moved to the project sites shall be thoroughly cleaned before it is brought to the sites to prevent the introduction of weed seeds. Equipment removed from the sites may not be returned to the sites again until it is thoroughly cleaned again.

PART 2 PRODUCTS – NOT USED

PART 3 EXECUTION – NOT USED

PART 4 MEASUREMENT AND PAYMENT

4.1 MEASUREMENT

A. There will be no direct measurement of this item.

4.2 PAYMENT

B. Partial payments for mobilization/demobilization will be made based on the lump sum bid price as follows:

- 25% of the amount bid for mobilization/demobilization when the Contractor has moved on-site and begun construction activities.
- 50% of the amount bid for mobilization/demobilization when 25% of the contract amount (exclusive mobilization/demobilization) has been completed.
- 75% of the amount bid for mobilization/demobilization when 50% of the contract amount (exclusive mobilization/demobilization) has been completed.
- 100% of the amount bid for mobilization/demobilization when 75% of the contract amount (exclusive mobilization/demobilization) has been completed.

END OF SECTION 01450

SECTION 01750

FINAL CLEANUP

Added Section.

PART 1 GENERAL

1.1 DESCRIPTION

A. This work consists of final cleanup of the project site prior to final acceptance.

PART 2 PRODUCTS – NOT USED

PART 3 EXECUTION

3.1 CONTRACTOR RESPONSIBILITES

The contractor shall be responsible for final cleanup at the end of the project to a level satisfactory to the owner. All construction debris, no mater how small, shall be collected and removed from the site. All wheel ruts shall be filled in and be leveled to match the adjacent grade and material. Re-seeding or re-sodding, or other re-surfacing may be necessary to repair any construction related impacts or damage.

All survey markings, stakes, temporary paint marks, flagging and other devices shall be removed regardless of who installed them. All excess pavement, concrete, gravel, soil, or other construction materials not intended for permanent use shall be removed.

All final slopes shall be dressed manually to remove woody debris, accumulated trash and oversized material. Any new slope or topsoil surfaces shall be hand raked to provide a uniform appearance. The contractor shall dress all gravel, pavement and concrete edges to eliminate abrupt edges and provide a smooth transition. All construction related temporary sediment control devices shall be removed as soon as practical.

PART 4 MEASUREMENT AND PAYMENT

4.1 PAYMENT

Unless specifically noted otherwise, all final cleanup work shall be incidental to other work items in the contract and no separate payment shall be made.

END OF SECTION 01750

SECTION 01800

EROSION AND SEDIMENT CONTROL

Added Section.

PART 1 GENERAL

1.1 DESCRIPTION

A. This work consists of furnishing, constructing, and maintaining permanent and temporary erosion control and sediment control measures as shown on the project drawings and/or project related construction permits.

PART 2 PRODUCTS

2.1 GENERAL

A. Temporary and erosion control products utilized include but are not limited to backfill material; berms; brush barriers; erosion control blankets, bales, wattles, logs, rolls; erosion control culvert pipe; detention basins; fertilizer; geotextile; mulch; plastic lining; riprap; sandbags; seed; silt fence; and water.

2.2 EROSION CONTROL WATTLES

A. Where designated, provide a sediment retention product made from straw and coconut fiber reinforced with a 100% bio-degradable netting. Use wood stakes to secure sediment retention product in place, spacing per the manufacturer's recommendations. An acceptable product is *Sediment Stop*, manufactured by *North American Green*, or approved equal.

2.2 EROSION CONTROL BLANKETS

A. Where designated, provide a sediment retention product made from straw and coconut fiber reinforced with a 100% bio-degradable netting. Use wood stakes to secure sediment retention product in place, spacing per the manufacturer's recommendations. An acceptable product is *BioNet® S150BN™*, manufactured by *North American Green*, or approved equal.

PART 3 EXECUTION

3.1 INSTALLATION

A. Provide permanent and temporary erosion control measures to minimize erosion and sedimentation during and after construction according to the contract erosion control plan, environmental permits, and as directed by the Project Representative. These erosion control measures shall be designed, implemented, and maintained by the

Contractor in accordance with Best Management Practices (BMPs) to control erosion and sediment release from the work site.

B. Install permanent and temporary erosion control measures according to the Storm Water Pollution Prevention Plan (SWPPP), if applicable, approved construction permits, and erosion control drawings.

C. When erosion control measures are not functioning as intended, immediately take corrective action.

PART 4 MEASUREMENT AND PAYMENT

4.1 MEASUREMENT AND PAYMENT

A. Erosion Control Wattles will be paid as part of the mobilization/demobilization bid item.

END OF SECTION 01800

SECTION 02235

CRUSHED BASE COURSE

All applicable portions of this specification section in the MPWSS shall apply with the following additions, deletions and/or modifications.

PART 2 PRODUCTS

3.3 FIELD DENSITY REQUIREMENTS

Add the following:

D. The Contractor is responsible for providing all compaction testing by an independent testing agency.

E. Compaction testing locations and frequency will be performed as follows:

Compaction Testing	Location*	Frequency
Crushed Base Course	Parking Lot	1 every 100 feet

* Station/Offset determined by Engineer

**Proof roll subgrade only for observation by Engineer prior to base course placement.

END OF SECTION 02235

SECTION 02501

HOT PLANT MIX ASPHALT CONCRETE

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Providing all labor, equipment, services, and materials for the application of asphalt materials for use in asphalt surfacing. All asphalt materials used in the completed and accepted work shall meet the requirements for the particular grade specified.

1.2 RELATED SECTIONS

A. Section 2232 - AGGREGATES FOR SURFACING AND ASPHALT PLANT MIXES

PART 2 PRODUCTS

2.1 MATERIALS

All materials used on this project shall conform to The Montana Public Works Standard Specifications (MPWSS), October 1988. The source of asphalt material shall be approved by the Project Manager before shipments are made to the project and the source of supply shall not be changed after work is started unless specifically permitted by the Project Manager in writing. The Contractor shall not order delivery of asphalt material without approval of the Project Manager and the Project Manager will not be liable for the quantity shipped.

A. Aggregates: The grading and proportioning of aggregates shall be such that the combined mineral aggregate conforms to the specified requirements. The aggregates shall meet the grading requirements of MPWSS Section 02503 Section 03 Materials, A. Plant Mix Aggregates, for Type A, B, or S-3.

B. Asphalt Materials: The asphalt materials shall be of the type and grade that conforms to MPWSS Section 02503 Section 03 Materials, B. Asphalt Materials.

C. Prime Coat: The prime coat shall consist of low viscosity MC-70 asphalt sprayed on the prepared surface of the nonasphaltic base course prior to any superimposed treatment or construction.

2.2 COMPOSITION OF MIXES:

The Contractor shall submit to the Project Manager for approval a job-mix formula for the mix required on the project. The job-mix formula will be within the limits of gradation given this specification. The job mix submittal shall contain the following information:

1.Gradation of all constituent aggregates.
2.Specific gravity of constituent aggregates and asphalt cement.
3.Source of supply of all materials and grade of A.C.
4.Marshall design curves for stability, unit weight, flow and volumetric requirements at asphalt contents below and above optimum.
5.Rice factor used in voids computations.
6.Composite aggregate grading.
7.Suggested asphalt content.
8.Marshall compactive effort (50 or 75 blows).
9.Date of mix design (job mix formula).

2.3 SAMPLING AND TESTING:

Sampling and testing of aggregates or other constituent materials will be performed by the Project Manager on a random periodic basis. Samples will be used to verify compliance with requirements set forth in these specifications.

PART 3 EXECUTION

3.1 APPLICATION

A. Delivery: Deliver the bituminous concrete to the project site at the weather conditions and temperatures specified in the MPWSS, Section 02503, 11. Construction Methods.

B. Surface Preparation: The area to be paved shall be true to line and grade and shall have a dry and properly prepared surface prior to the start of paving operations.

C. Asphalt Prime Coat: Asphalt prime coat shall be sprayed at a rate of 0.20 to 0.50 gallons per square yard. Immediately before applying the prime coat the surface shall be cleaned of all dirt and loose materials by means of blowers or power and hand brooming. Application shall be made when the surface is dry or slightly damp and, unless otherwise permitted by the Project Manager, when air temperature in the shade is not less than 50 degrees F.

D. Distribution and Spreading: At the time of delivery to the work site, the temperature of the mixture shall not be lower than the temperatures shown in MPWSS Section 02503, 11. Construction Methods.

The asphalt concrete shall be evenly spread upon the base to such a depth that, after rolling, it will be of the specified cross section and grade of the course being constructed.

E. Compaction: Immediately after spreading, striking off and correcting surface irregularities, the Contractor shall compact the bituminous mixture to at least 95 percent of the target density as established by the Project Manager from test specimens made from samples taken from the mixture produced and used on the project or from information submitted with the mix design. Compactive rolling shall be completed before the temperature falls below 175 degrees or the surface begins to check or crack.

Finish rolling shall begin immediately after compactive rolling and shall continue until roller marks are eliminated. Finish rolling shall be completed the same day the mixture is placed.

Any mixture that becomes loose, broken, or mixed with dirt, or is in any defective shall be removed and replaced with fresh, hot mixture and compacted at no expense to the Department.

F. Smoothness: Upon completion the pavement shall be true to grade and cross section. When a 10-foot straight edge is laid on the finished surface, the surface shall not vary from the edge of the straight edge more than 1/2 inch, except at intersections or changes in grade. Any areas that are not within this tolerance shall be brought to grade immediately following the initial rolling. If paving material has been cooled below the lower limits of the spreading temperatures prescribed the surface of the pavement shall be brought to true grade by removing the paving material in the area to be repaired. A layer or 1 inch minimum shall be used for the repair and no feathering of edges shall be allowed.

END OF SECTION

SECTION 02595

SLURRY SEAL

PART 1 GENERAL

1.1 SECTION INCLUDES

A. This work shall consist of mixing and spreading of slurry seal on existing pavement or surface.

1.2 RELATED SECTIONS

A. Section 2232 - AGGREGATES FOR SURFACING AND ASPHALT PLANT MIXES

PART 2 PRODUCTS

2.1 MATERIALS

All materials used on this project shall conform to The Montana Public Works Standard Specifications (MPWSS), October 1988. The source of asphalt material shall be approved by the Project Manager before shipments are made to the project and the source of supply shall not be changed after work is started unless specifically permitted by the Project Manager in writing. The Contractor shall not order delivery of asphalt material without approval of the Project Manager and the Project Manager will not be liable for the quantity shipped.

A. **Aggregates**: Aggregate shall meet the requirements of a Type I or Type II grading. Aggregate shall be of sound, durable crushed stone with no round particles such as granite, slag, limestone, chat, or other high-quality aggregate, or combination thereof. The percentage composition by weight of the aggregate shall conform to the following gradings:

Sieve Sizes	Type I – Percentage Passing	Type II - Percentage Passing
3/8”	100	100
No. 4	100	90-100
No. 8	90-100	65-90
No. 16	65-90	45-70
No. 30	40-65	30-50
No. 50	25-42	18-30
No. 100	15-30	10-21
No. 200	10-20	5-15

The composition of dry aggregate in the slurry seal shall be 13% to 18% by weight of the theoretical asphalt content. Rate of application shall be 14 lb. to 16 lb. per square yard.

B. **Asphalt Emulsion**: The asphalt emulsion shall be cationic "quick setting" SS-1, SS-1h, CSS-1, CSS-1h, CQS-1h, or approved by the project manager.

C. **Additives**: Additives may be used to retard or accelerate the break-set of the slurry seal or to improve the resulting finished surface. The use of additives in the slurry mix (or individual materials) shall be made initially in quantities predetermined by the mix design with field adjustments as required.

2.2 COMPOSITION OF MIXES:

The Contractor shall submit to the Project Manager for approval a job-mix formula for the mix required on the project. The job-mix formula will be within the limits of gradation given this specification. The job mix submittal shall contain the following information:

1.Gradation of all constituent aggregates.
2. Source of supply of all materials.
3. Type and quantity of all additives
4. Type and application of asphalt emulsion.
5. Date of mix design (job mix formula).

PART 3 EXECUTION

3.1 APPLICATION

A. **Surface Preparation**: The area to be sealed shall be true to line and grade and shall have a dry and properly prepared surface prior to the start of paving operations. Power sweepers shall be required to sweep from face of curb to face of curb or, for those streets without curbs, between the edges of street pavement. This shall involve a minimum of three passes with a power broom street sweeper (Mobile or equivalent). Pavement missed by or inaccessible to broom sweepers shall be swept clean by other approved methods. Contractor shall provide whatever compressed air or other approved cleaning methods necessary to remove all dirt and loose material from the pavement.

B. **Application Rate**: The slurry seal mixture shall be of proper consistency at all times so as to provide the application rate required by the surface condition. The average application rate shall be:

Aggregate Type	Application Rate
Type I	8-12 lb/sy
Type II	12-20 lb/sy

C. **Temperature:**
   a. The slurry seal shall not be applied when either atmospheric or pavement temperature is 55 degrees Fahrenheit and falling but may be applied when either

the atmospheric or pavement is 45 degrees Fahrenheit and rising. The slurry seal shall not be applied during periods of abnormally high relative humidity. Slurry seal shall not be applied when raining or foggy.

b. A sufficient amount of slurry shall be carried in all parts of the spreader at all times so that complete coverage is obtained. No lumping, balling or unmixed aggregate shall be permitted. No segregation of the emulsion and aggregate fines from the coarse aggregate will be permitted. If coarse aggregate settles to the bottom of the mix, the slurry will be removed from the pavement. No excessive breaking of the emulsion will be allowed in the spreader box. No streaks such as caused by oversize aggregate will be left in the finished pavement.

D. **Placement:**

a. The slurry seal shall not be placed within 90 days of paving and shall not be placed after September 30.

b. If the paving is not completed by July 1, the slurry seal shall be placed the following year.

E. **Compaction:** The surfaced areas shall be subjected to a minimum of two (2) full coverage passes by the roller. Rolling should not commence until the slurry has cured enough so that it will not pick up on the tires of the roller but before the slurry has set up. Any mixture that becomes loose, broken, or mixed with dirt, or is in any defective shall be repaired to the satisfaction of the project manager.

F. **Finishing and Sweeping:** Loose aggregate remaining after the slurry seal has set shall be swept up and disposed of the day after it was placed.

G. **Preservation of Property:** Immediately preceding the slurry seal application, the Contractor shall cover all grates, slotted manholes, and other appurtenances on and adjacent to the pavement that would allow the entry of the sealing materials; mask with roofing paper, all closed manhole covers, water and gas valve box covers, monuments, monument boxes, etc.; and remove all existing raised pavement markers, thermoplastic pavement markings. Drainage inlets shall be uncovered and cleaned to the satisfaction of the Engineer as soon as the slurry seal sets. The other surface utilities shall be uncovered and cleaned the following day after completion of the slurry seal at each location. Gutters, curbs, sidewalks, driveways, shoulders and other structures adjacent to the pavement to be slurry sealed shall be cleaned of excess seal to the satisfaction of the Engineer.

END OF SECTION